

FIG. 1A

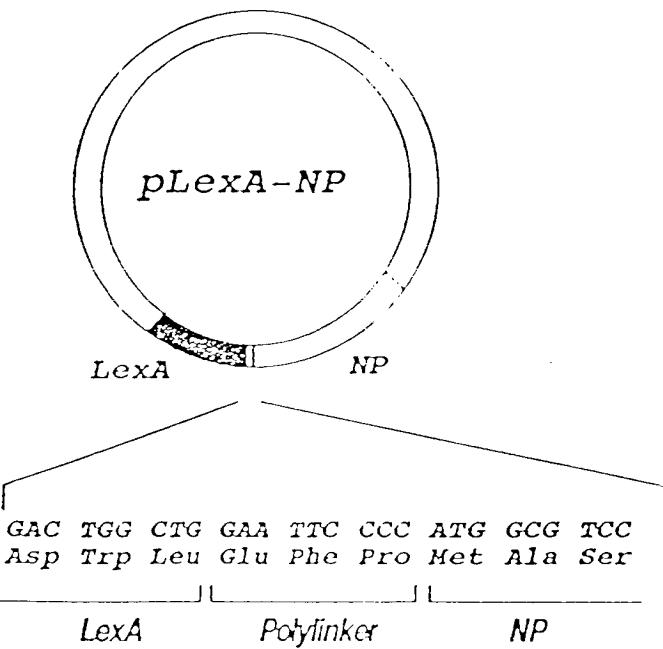


FIG. 1B

20										40										60									
CTAACTTCAG					CGGTGGCACC					GGGATCGGTT					GCCTTGAGCC					TGAAATATGA					CCACCCCCAGG				
																									M T T P G>				
80										100										120									
AAAAGAGAAC					TTTCGCCTGA					AAAGTTACAA					GAACAAATCT					CTGAATCCCG					ATGAGATGCG				
K E N					F R L					K S Y K					N K S					L N P					D E M R>				
140										160										180									
CAGGAGGAGG					GAGGAAGAAG					GACTGCAGTT					ACGAAAGCAG					AAAAGAGAAC					AGCAGTTATT				
F R R					E E E					G L Q L					R K Q					K R E					E Q L F>				
200										220										240									
CAAGCGGAGA					AATGTTGCTA					CAGCAGAAGA					AGAAACAGAA					GAAGAAGTTA					TGTCAGATGG				
K R R					N V A					T A E E					E T E					E E V					M S D G>				
260										280										300									
AGGCTTCAT					GAGGCTCAGA					TTAGTAACAT					GGAGATGGCA					CCAGGTGGTG					TCATCACTTC				
G F H					E A Q					I S N M					E M A					P G G					V I T S>				
320										340										360									
TGACATGATT					GAGATGATAT					TTTCCAAAAG					CCAGAGAGAA					CAGCTTCAG					CAACACAGAA				
D M I					E M I					F S K S					P E Q					Q L S					A T Q F>				
380										400										420									
ATTCAAGGAAG					CTGCTTCAA					AAGAACCTAA					CCCTCCATT					GATGAAGTTA					TCAGCACACC				
F R K					L L S					K E P N					P P I					D E V					I S T P>				
440										460										480									
AGGAGTAGTG					GCCAGGTTTG					TGGAGTTCT					CAAACGAAAA					GAGAATTGTT					CACTGCAGTT				
G V V					A R F					V E F L					K R H					E N C					S L Q F>				
500										520										540									
TGAATCAGCT					TGGGTACTGA					CAAATATTGC					TTCAGGAAAT					TCTCTTCAGA					CCCGAATTGT				
E S A					W V L					T N I A					S G N					S L Q					T R I V>				
560										580										600									
GATTCAAGCA					AGAGCTGTGC					CCATCTTCAT					AGAGTTGCAC					AGCTCAGAGT					TTGAAGATGT				
I Q A					R A V					P I F I					E L L					S S E					F E D V>				
620										640										660									
CCAGGAACAG					GCAGTCTGGG					CTCTTGGCAA					CATTGCTGCA					GATACTACCA					TGTGCAGGGAA				
Q E Q					A V W					A L G N					I A C					D S T					M C R D>				
680										700										720									
CTATGTCTTA					GACTGCAATA					TCCTTCCCCC					TCTTTTGCAG					TTATTTTAA					AGCAAAACCG				
Y V L					D C N					I L P P					L L C					L F S					K Q N F>				
740										760										780									
CCTGACCATC					ACCCCGAATG					CAGTATGGC					TTTGTCTAAT					CTCTGTAGAG					GGAAAAGTCC				
L T M					T R N					A V W A					L S E L					L C E G K S F>									

FIG. 2A

800 820 840
 ACCTCCAGAA TTTGCAAGG TTTCTCCATG TCTGAATGTG CTTCCTGGGT TGCTGTTTC-T
 P P E F A K V S P C L N V L S W L L F V>
 860 880 900
 CAGTGACACT GATGACTGG CTGATGCCTG CTGGGCCCTC TCATATCTAT CAGATGGACC
 S D T D V L A D A C W A L S Y L S D G F>
 920 940 960
 CAATGATAAA ATTCAAGCGG TCATCGATGC GGGAGTATGT AGGAGACTTG TGGAACTGCT
 N D K I Q A V I D A G V C R R L V E L L>
 980 1000 1020
 GATGCATAAT GATTATAAAAG TGGTTCTCC TGCTTGCGA GCTGTGGAA ACATTGTCAC
 M H N D Y K V V S P A L R A V G N I V T>
 1040 1060 1080
 AGGGGATGAT ATTCAGACAC AGGTAATTCT GAATTGCTCA GCTCTGCAGA GTTTATTGCA
 G D D I Q T Q V I L N C S A L Q S L L H>
 1100 1120 1140
 TTGCTGAGT AGCCCAAAGG AATCTATCAA AAAGGAAGCA TGTGACGAA TATCTAATAT
 L L S S P K E S I K K E A C W T I S N I>
 1160 1180 1200
 TACAGCTGGA AATAGGGCAC AGATCCAGAC TGTGATAGAT GCCAACATTT TCCCAGCCCT
 T A G N R A Q I Q T V I D A N I F P A L>
 1220 1240 1260
 CATTAGTATT TTACAAACTG CTGAATTCG GACAAGAAAA GAAGCACTTT GGGCCATCAC
 I S I L Q T A E F R T R K E A A W A I T>
 1280 1300 1320
 AAATGCAACT TCTGGAGGAT CAGCTGAACA GATCAAGTAC CTAGTAGAAC TGGGTTGTAT
 N A T S G G S A E Q I K Y L V E L G C I>
 1340 1360 1380
 CAAGCCGCTC TGTGATCTCG TCACGGTCAT GGACTCTAAG ATTGTACAGG TTGCCCTAAA
 K P L C D L L T V M D S K I V Q V A L N>
 1400 1420 1440
 TGGCTTGGAA AATATCTCTGA GGCTTGGAGA ACAGGAAGGC AAAAGGAACG GCACTGGCAT
 G L E N I L R L G E Q E A K R N G T G I>
 1460 1480 1500
 TAACCCTTAC TGTGCTTGA TTGAAGAAC TTATGGTCG GATAAAATTG AGTTCTTACA
 N P Y C A L I E E A Y G L D K I E F L Q>
 1520 1540 1560
 GAGTCATGAA AACCAGGAGA TCTACCAAAA GGCCTTGAT CTTATTGAGC ATTACTTCGG
 R H E N Q E I Y Q K A F D L I F H Y F G>
 1580 1600 1620
 GACCGGAGAT GAAAGACAGA GCAATTGGACG CCGCTTGTGA CTTAACCCAG AGCACTTACAT
 T E D E D G S I A I Q V P L H Q G Q Y I>

FIG. 2B

1640 1660 1680
 CTTCCAAACAG TGTGAGGCTC CTATGAAAGG TTTCCAGCCT TGAAAGCAATA CTCTGCTTTC
 F Q Q C E A P M E G F Q L>
 1700 1720 1740
 ACGTACCTGT CCTCAGACCA GGCTACCCAG TCGAGTCCTC TTGTGGAGCC CACAGTCCTC
 1760 1780 1800
 ATGGAGCTAA CTTCTCAAAT GTTTCCATA ATACTGTTTG CGCTCATTTG CTTGCCTTGC
 1820 1840 1860
 GCACCTGCTC TCTTACACAC ATCTGGAAAA CCTCCGGCTC TCTGTGGTGG GATACCCTTC
 1880 1900 1920
 TAATAAAAGG GTAACCAGAA CGGCCCACTC TCTTTACGG AAAAATCCCT AGGCTTTGGA
 1940 1960 1980
 GATCCGCACT TACATTAGAG TTATGGGAAT ATACACATAT TAATGTGGCT CCCTTTTTCT
 2000 2020 2040
 TGTGGGGGAA TAAAAGAGGA CTCCTCCTCA TTCCCTTAA CATGGGGGAA AAAACTGACA
 2060 2080 2100
 TTAAAAGATG AGACTAAATC TTTATCTTGA ATTTTACACA ACTACTTACG ACAAGGGAGA
 2120 2140 2160
 TGTTTAGACC TGTGGTATA CTCAGAGTA CTTTCATGA GTTCTTCCAC AGTGAACCC
 2180 2200 2220
 TGGATTACCT GGTGGCTTT TCTAGCCAGA TTGCATTAAT CCTTACTGAG ATTGGATGGT
 2240 2260 2280
 TTTCTTCCCT CTATTGCCCC CATTCTTCAG ATATTAAGT TAAACCATCC ACTCCCTAAC
 2300 2320 2340
 CTTCAGCCTT CACTGAATGT GCTTTCTAGT TGTCAGGAAT GCTGAAGAAT TAACACTPTG
 2360 2380 2400
 ACTCCTAAAT GTGATACTGG TGGGTAAGAG CAGGGCACAT TTAATTGTT CGCTTTGCT
 2420 2440 2460
 TCTCTTGGT CTGGGACAT TTAATTGTT CGCTTTGCT TCTCTTGGT CTTTCCAAAT
 2480 2500 2520
 ACTTAGTAAT CGAAAACAT ATCCTGTAAT TTAATAAAA AACTAAGGA CGAAAACCC
 2540 2560 2580
 CCTCCAAATT TCCCAAATGC ATGCAATGTA ACTAGGAGCT GTGTTCTGC ATTAAAATAA
 2600 2620 2640
 ATGTTTCAGG CTTTTCTGGT CTCATTAACG CCTCTTAAAT AAAATTGGAG TTPCACTCTAG
 2680 2700 2720
 CGTTTTTCCTT CTTTTCTGGT CTCATTAACG CCTCTTAAAT AAAATTGGAG TTPCACTCTAG

FIG. 2C

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2720 2740 2760
TTTCTTAGGT GCAGCTCGAT TCTAATCTTT TCATGCTGCA CACGATTCCT TTAATCGATA
2780 2800 2820
GCATCCTTAT CTGAAAGAAA TAACCATCTT CTCAACATGA CCTGCTTAAC CCAATAAGA
2840 2860 2880
ACAGTGATCT TATAACCTCA TTGTTTCCTA ATCTATTTTA TTTCATCTCC TGCTAGTACT
2900 2920 2940
GTGCCGCTTC CCCCTCCCCC CACACAAAAT AAAAACAGTA TCTCGCTTCT GGCTCATTTC

FIG. 2D

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(SHEET

7

OF 20)

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M

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8

Pol/NP:

+

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+

-

+

-

+

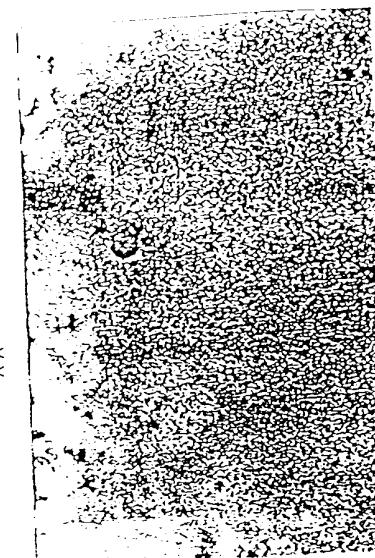
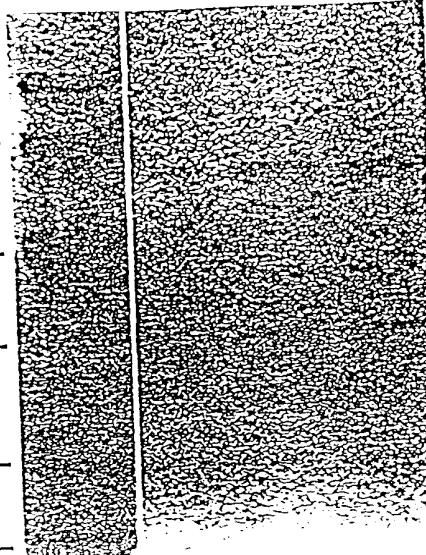
94—
67—
43—
30—
20—
14—

FIG. 4

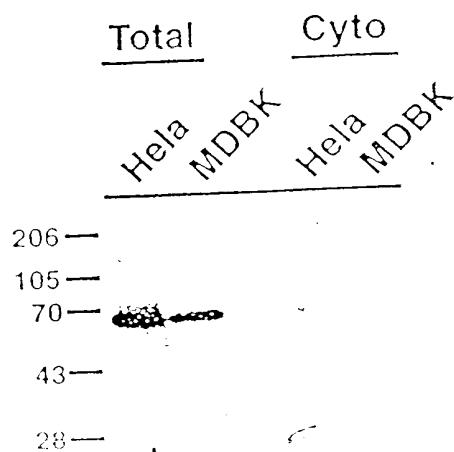


FIG. 5

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(SHEET 8

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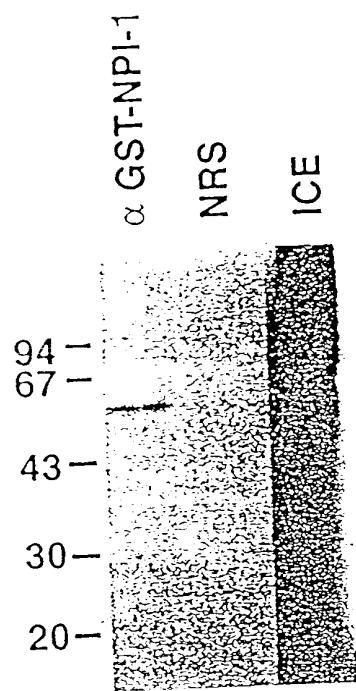


FIG. 6

20 40 60
GGAGGCACCG AAGGGCAGCG CCGAGTCGGA GGGGGCGAAG ATTGACGCCA GTAAGAACGA
80 100 120
GGAGGGATGAA GGCCATTCAA ACTCCTCCCC ACGACACTCT GAAGCAGCGA CGGCACAGCG
140 160
GGAAGAATGG AAAATGTTTA TAGGAGGCCT TAGCTGGGAC ACTACAAAGA

FIG. 7

20 40 60
 GAGGTCAATG TGGAGCTGAG GAAAGCTAAG AAGGATGACC AGATGCTGAA GAGGGAGAAAT
 E V N V E L F K K F D D Q M L E F P N>
 80 100 120
 GTAAGCTCAT TTCCCTGATGA TGCTACTTCT CCGCTGCAGG AAAACCGCAA CAACCCAGGGC
 V S S F P D D A T S P L Q E N R N N Q G>
 140 160 180
 ACTGTAAATT GGTCTGTTGA TGACATTGTC AAAGGCATAA ATAGCAGCAA TGTGGAAAAT
 T V N W S V D D I V K G I N S S N V E N>
 200 220 240
 CAGCTCCAAG CTACTCAAGC TGCCAGGAAA CTACTTTCCA GAGAAAAACA GCCCCCCATA
 Q L Q A T Q A A R K L L S R E K Q P P I>
 260 280 300
 GACAACATAA TCCGGGCTGG TTTGATTCCG AAATTTGTGT CCTTCTTGGG CAGAACTGAT
 D N I I R A G L I P K F V S F L G R T D>
 320 340 360
 TGTAGTCCCA TTCAGTTGA ATCTGCTTGG GCACTCACTA ACATRGCTTC TGGGAACTCA
 C S P I Q F E S A W A L T N I A S G T S>
 380 400 420
 GAACAAACCA AGGCTGTGGT AGATGGAGGT GCCATCCAG CATTCAATTTC TCTGTTGGCA
 E Q T K A V V D G G A I P A F I S L L A>
 440 460 480
 TCTCCCCATG CTCACATCATG TGAACAAAGCT GTCTGGCTC TAGGAAACAT TGCAGGTGAT
 S P H A H I S E Q A V W A L G N I A G D>
 500 520 540
 GGCTCAGTGT TCCGAGACTT GGTATTAAG TACGGTGCAG TTGACCCACT GTTGGCTCTC
 G S V F F D L V I K Y G A V D F L I A L>
 560 580 600
 CTTGCAGTTC CTGATATGTC ATCTTAGCA TGTGGCTACT TACGTAATCT TACCTGGACA
 L A V P D M S S L A C G Y L R N L T W T>
 620 640 660
 CTTTCTAACCT TTTGCCGCAA CAAGAATCCT GCACCCCCGA TAGATGCTGT TGAGCAGATT
 L S N L C R N K N P A P P I D A V E Q I>
 680 700 720
 CTTCCTAACCT TAGTCGGCT CCTGCATCAT GATGATCCAG AAGTGTTCAGC AGATACCTGC
 L P T L V F L L H H D D P E V L A D T C>
 740 760 780
 TGGGCTATTT CCTACCTTAC TGATGGTCCG AATGAACGAA TTGGCATGGT GGTGAAAACA
 W A I S Y L T D G P N E F I C M V V K T>

FIG. 8A

800 820 840
 GGAGTTGTGC CCCAACTTGT GAAGCTTCTA GGAGCTTCTG AATTGCCAAT TGTGACTCCT
 G V V P Q L V E L L G A S E L P I V T P
 860 880 900
 GCCCTAAGAG CCATAGGGAA TATTTGTCACT GGTACAGATG AACAGACTCA GGTGTTGTTATT
 A L R A I G N I V T G T D E Q T Q V V I>
 920 940 960
 GATGCAGGAG CACTCGCCGT CTTTCCCAGC CTGCTCACCA ACCCCAAAAC TAACATTCAG
 D A G A L A V F P S L L T N P K T N I Q>
 980 1000 1020
 AAGGAAGCTA CGTGGACAAAT GTCAAACATC ACAGCCGCC GCCAGGACCA GATACAGCAA
 K E A T W T M S N I T A G R Q D Q I Q Q>
 1040 1060 1080
 GTTGTGAATC ATGGATTAGT CCCATTCCCTT GTCAGTGTTC TCTCTAAGGC AGATTTTAAG
 V V N H G L V P F L V S V L S K A D F K>
 1100 1120 1140
 ACACAAAAGG AAGCTGTGTG GGCCTGTGACC AACTATACCA GTGGTGGAAC AGTTGAAACAG
 T Q K E A V W A V T N Y T S G G T V E Q>
 1160 1180 1200
 ATTGTGTACC TTGTTCACTG TGGCATAATA GAACCGTGA TGAACCTCTT AACTGCAAA
 I V Y L V H C G I T E P L M N L L T A F>
 1220 1240 1260
 GATACCAAGA TTATTCTGGT TATCCTGGAT GCCATTCAAA ATATCTTTCA GGCTGCTGAG
 D T K I I L V I L D A I S N I F Q A A E>
 1280 1300 1320
 AAACTAGGTG AAACTAGCTG CCCGTCTTCAG CAGATTCAAG AACAAGGGAA AAGACAGTAC
 K L G E T S C P S S Q I Q E Q G K R Q Y>
 1340 1360 1380
 AGAAATGAGG CGTCCGAGGC GTGGCAGAAT AGAGAAACTT AGTATAATGA TTGAAGAAATG
 F N E A S E A S Q N R E T>
 1400 1420 1440
 TGGAGGCTTA GACAAATTG AAGCTCTACA AAACCATGAA AATGAGTCTG TGTATAAGC
 1460 1480 1500
 TTCGTTAACG TTAATTGAGA AGTATTCTC TGTAGAGGAA GAGGAGATC AAAACGTTGT
 1520 1540 1560
 ACCAGAAACT ACCTCTGAAG GCTACACTTT CCAAGTTCAAG GATGGGGCTC CTGGGACCTT
 1580 1600 1620
 TAACCTTTAG ATCATGTAGC TGAGACATAA ATTTGTTGTG TACTAAGTTT GGTATTGTG
 1640 1660 1680
 CTTTATTTTTT CTTTCTACTAACG AAGCTTTTGT TAAATTTGGT TGTGTTACTGT AGGTATTTT

FIG. 8B

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1700 1720 1740
ACACTGAAAC TATACTTGGAA CAGTTCCAAC TGTACATAGA TACCTGATGA AGCTTGTCCT
1760 1780 1800
CTGACTAGGT TTCTAATPTC TATGTGGAAAT TTCCCTATCTT GCAGCATGCC GAAATAAA
1820
ATPCAAGTCC ACCCTTTCTC TGACTTC

FIG. 8C

20 40 60
GAAAGACCAA GAGGGGTGTC GACTGCTAGA GCGGAGCAGA AGGGGGCTA AATCAAGGA
80 100 120
ACTTGTTCTC TCAAGCTCTT CTGGCAGTGA TTCTGACAGT GAGGTTGACA AAAAGTTAAG
140 160 180
CAGGAAAAAG CAAGTTGCTC CAGAAAAACC TGTAAAGAAA CAAAAGACAG GTGAGACTTC
200 220 240
GAGAGCCCTG TCATCTCTA AACAGAGCAG CAGCAGCAGA GATGATAACA TGTTTCAGAT
TGGGAAAAATG AGGTCAGTT

FIG. 9

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20 40 60
 TGTGGACTGT GGCTTTGAGC ATCCGTCAGA AGTCCAGCAT GAGTGCATCC CTCAGGCCAT
 80 100 120
 TCTCGGAAATG GATGTCCTGT GCCAGGCCAA GTCCGGCATG GGAAAGACAG CAGTGTPTGT
 140 160 180
 CTTGGCCACA CTGAAACAGC TGGAGCCAGT TACTGGGAG GTCCTGTAC TGGTGATGTG
 200 220
 TCACACTCGG GAGTTGGCTT TTCAGATCAG CAAGGAATAT G

FIG. 10

20 40 60
 ATTTGTAAAC CCCGGAGCGA GGTCTGCTT ACCCGAGGCC GCTGCTGTGC GGAGACCCCC
 80 100 120
 GGGTGAAGCC ACCGTCATCA TGTCTGACCA GGAGGCAAAA CCTTCAACTG AGGACTTGGG
 140 160 180
 GGATAAGAAG GAAGGTGAAT ATATTAAACT CAAAGTCATT GGACAGGATA GCAGTGAGAT
 200 220 240
 TCACTTCAAA GTGAAAATGA CAACACATCT CAAGAAACTC AAAGAATCAT ACTGTCAAAG
 260 280 300
 ACAGGGTGTGTT CCAATGAATT CACTCAGGTT TCTCTTTSAG GGTCAAGAGAA TTGCTGATAA
 320 340 360
 TCATACTCCA AAAGAACTGG GAATCGAGGA AGAAGTTGTG ATTGAAGTTT ATCAGGAACA
 AACGGGGGGT CA

FIG. 11

-103 TCTGACCCCTCGTCCCGCCCCGC -90
 -81 CATTGCGCUGCCTCCCTGTCCCCAGTCGGCGTCCAGCGGCTCTGCTTGTGTTGTTGCTGAGGCCTTATTC -1
 1 ATGGGCTCACCGCTGAGGGTCGACGGCGGGTGGTACTGGTCACCGGGCGGGGGCAGGATTGGCGAGCCTATGCCCT 80
 M G S P U R F D G R V V L V T G A G A G L G R A Y A L 27
 81 GGCTTTGCAGAANAGGGAGCGTTAGTTGTGAATGATTGGGAGGGACTTCAAAGGAGTGTCTAAAGGCTCCTTAG 160
 A F A E R G A L V V V N D L G G D F K G V G K G S L 53
 161 CTGATAAGGTTGTTGAAGAAAAGAAGGAGAGGTGGAAAAGCAGTGGCCAATATGATTCACTGGAAAGAAGGAGAGAAG 240
 A D K V V E E I R R R G G K A V A N Y D S V E E G E K 80
 241 GTTGTGAAGACAGCCCTGGATGCTTTGGAAGAATAGATGTTGTGGTCAACAATGCTGGAATTCTGAGGGATCATTCTT 320
 V V K T A L D A F G R I D V V V N N A G I L R D H S F 107
 321 TGCTAGGATAAGTGTGAAGACTGGGATATAATCCACAGAGTTCATTGCGGGTTCACTTCAAAGTGCACACGGGAGCAT 400
 A R I S D E D W D I I H R V H L R G S F Q V T R A A 133
 401 GGGAACACATGAAGAAAACAGAACTATGGAAGGATTATTATGACTTCATCAGCTTCAGGAATATATGGCAACATTGGCCAG 480
 W E H M K K Q K Y G R I I M T S S A S G I Y G N F G Q 160
 481 GCCAATTATAGTGTGCAAAGTGGGCTTCTGGCCTTGCAAATTCTCTGCAATTGAAAGCCAGGAAAAGCAACATTCA 560
 A N Y S A A K L G L L G L A N S L A I E G R K S N I H 187
 561 TTGTAACACCATTGCTCTTAATGGGGATCACGGATGACTCAGACAGTTATGCTGCAAGATCTTGTGAAAGCCTTGAAGC 640
 C N T I A P N A G S R M T Q T V M P E D L V E A L K 213
 641 CAGAGTATGGCACCTCTTGTCTTGGCTTGTCAGAGAGTTGTGAGGAATGGTGGCTTGTGAGGTTGGCA 720
 P E Y V A P L V L W L C H E S C E E N G G L F E V G A 240
 721 GGATGGATTGGAAAATTACGCTGGGAGCGGACTCTGGAGCTATTGTAAGACAAAAGAACATCAGCAACTGGCAGTA 800
 G W I G K L R W E R T L G A I V R Q K N H P M T P E A 267
 801 AGTCAAGGCTAACTGGAGAAGATCTGTGACTTGGAGAATGCCAGCAAGCCTCAGAGTATCCAAGAACACTGGCAGTA 880
 V K A N W K K I C D F E N A S K P Q S I Q E S T G S 293
 881 TAATTGAAGTTCTGAGTAAAATAGATTCAAGAAGGAGTTCAAGCAATGACTAGTCGTGCAACGCTACAGCAACA 960
 I I E V L S K I D S E G G V S A N H T S R A T S T A T 320
 961 TCAGGATTGCTGGCTATTGGCCAGAAACTCCCTCCATTCTTCTATGCTTACGGAACTGGAGCTATTATGTATGC 1040
 S G F A G A I G Q K L P P F S Y A Y T E L E A I M Y A 347
 1041 CCTTGAGTGGGAGCGTCAATCAAGGATCCAAAAGATTGAAATTATGAGGAAGTCTGATTCTCTGTTGC 1120
 L G V G A S I K D P K D L K F I Y E G S S D F S C L 373
 1121 CCACCTTCGGAGTTATCATAGGTCAAGAAATCTATGATGGGTGGAGGATTAGCAGAAATTCTGGACTTCAATCAACTT 1200
 P T F G V I I G Q K S M M G G G L A E I P G L S I N F 400
 1201 GCAAAGGTTCTCATGGAGAGCACTTAGAGTTATATAAACCACTTCCCAGAGCAGGAATTAAAGTGAAGCAGT 1280
 A K V L H G E Q Y L E L Y K P L P R A G K L K C E A V 427
 1281 TGTTGCTGATGTCCTAGATAAGGATCCGGTGTAGTGTATTATGGATGTCATTCTTATGAGGAAGGACTTATAT 1360
 V A D V L D K G S G V V I I M D V Y E Y S E K E L I 453
 1361 GCGACAAATCAAGTGTCTCTTCTTGTGGCTCTGGAGGCTTGGTGGAAAGCGGACATCAGACAAACTCAGCTAGCT 1440
 C H N Q Y S L F L V C S G G F G G Y F T S I K V K A 480

FIG. 12A

1441 GTAGCCATACCTAATAGACCTCCTGATGCTGACTTACAGATACCACCTCTTAATCAGGCTGCTTGTACCGCCTCAG 1520
 V A I P N R P P D A V L T D T T S L N Q A A L Y R L S 507
 1521 TGGAGACCGGAATCCTTACACATTGATCCTAACCTTGCTAGTCTAGCAGGTTTGACAAGCCATATTACATGGATTAT 1600
 G D R N P L H I D P N F A S L A G F D K P I L H G L 533
 1601 GTACATTTGGATTCTGCCAGGCGTGTGTTACAGCAGTTGCAGATAATGATGTCAAGATTCAGCCAGTTAAGGCT 1680
 C T F G F S A R R V L Q Q F A D N D V S R F K A V K A 560
 1681 CGTTTGCAAAACCAAGTATATCCAGGACAAACTCTACAAACTGAGATGTGGAAGGAAGGAAACAGAATTCTTCAAAAC 1760
 R F A K P V Y P G Q T L Q T E M W K E G N R I H F Q T 587
 1761 CAAGGTCCAAGAAACTGGAGACATTGTCATTCAAATGCATATGTGGATCTTGCACCAACATCTGACTTCAGCTAAGA 1840
 K V Q E T G D I V I S N A Y V D L A P T S G T S A K 613
 1841 CACCCCTCTGAGGGCGGGAAAGCTTCAGAGTACCTTGAGGAAATAGGACGCCCTAAAGGATATTGGGCTGAG 1920
 T P S E G G K L Q S T F V F E E I G R R L K D I G P E 640
 1941 GTGGTGAAGAAAGTAAATGCTGTATTTGAGTGGCATATAACCAAAGGCGGAAATATTGGGCTAAGTGGACTATTGACCT 2000
 V V K K V N A V F E W H I T K G G N I G A K W T I D L 667
 2001 GAAAAGTGGTCTGAAAAAGTGTACCAAGGCCCTGCAAAAGGTGCTGCTGATACAACAATCATACTTCAGATGAAGATT 2080
 K S G S G K V Y Q G P A K G A A D T T I I L S D E D 693
 2081 TCATGGAGGTGGCTGGCAAGCTTGACCTCTAGAAGGCATTCTTAGTGGCAGGCTGAAGGCCAGAGGGAAACATCATG 2160
 F M E V V L G K L D P Q K A F F S G R L K A R G N I M 720
 2161 CTGAGCCAGAAACTCAGATGATTCTAAAGACTACGCCAAGCTCTGAAGGGCACACTACACTATTAAATAAAATGGAAT 2240
 L S Q K L Q M I L K D Y A K L 735
 2241 CATTAAATACTCTTCACCCAAATATGCTGATTATTCTGAAAAGTGATTAGAACTAAGATGCCAGGGAAATTGCTTA 2320
 2340 ACATTTCAGATACTGAGATACTGAGATTTCTACTAATTTTCATGTATCATTATTTTACAAGGAACATA 2400
 2401 TATAAGCTAGCACATAATTATCCTCTGTTCTTAGATCTGTATCTTCATAATAAAAAAATTGCCCAAGTCCTGTTCC 2480
 2480 TTAGAATTGTGATAGCATTGATAAGTGAAGGAAATTAATCAATAAGCCCTTGATAACCTTTAAAAA 2560
 AAAAAA

FIG. 12B

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(SHEET

OF 20)

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Kb

9.5 .

7.5 .

4.4 .

2.37 .

1.35 .

0.24 .

FIG. 13

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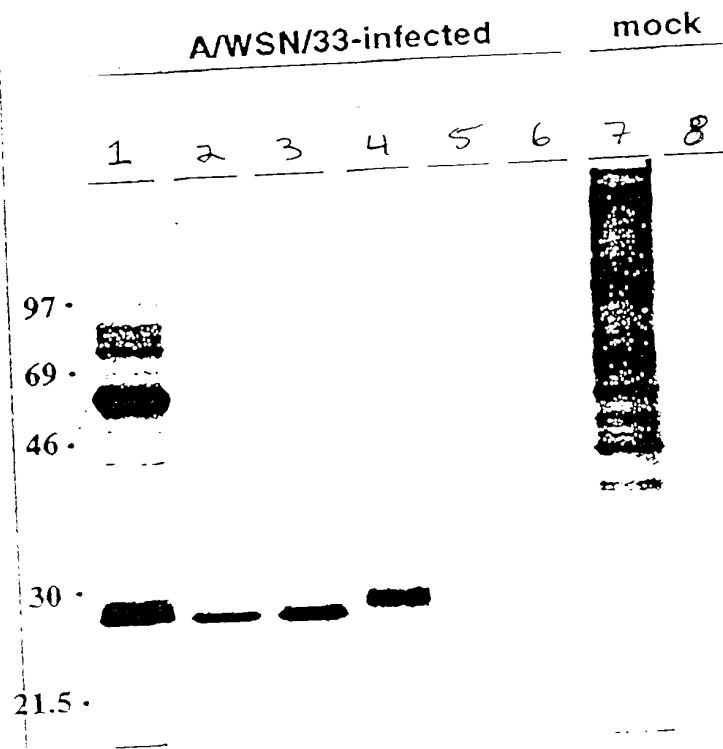
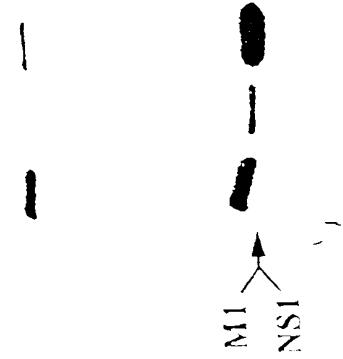


FIG. 14

PANEL A

A/duck/Alberta/76

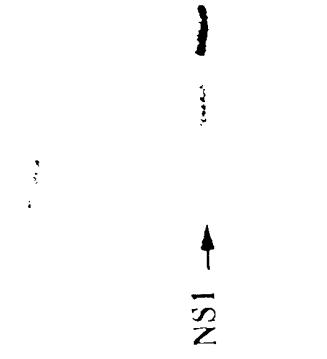
α - GST-
T NS1 K5 NI GST



PANEL B

A/turkey/Oregon/71

α - GST-
T NS1 K5 NI GST



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FIG. 15A

PANEL C PANEL D PANEL E

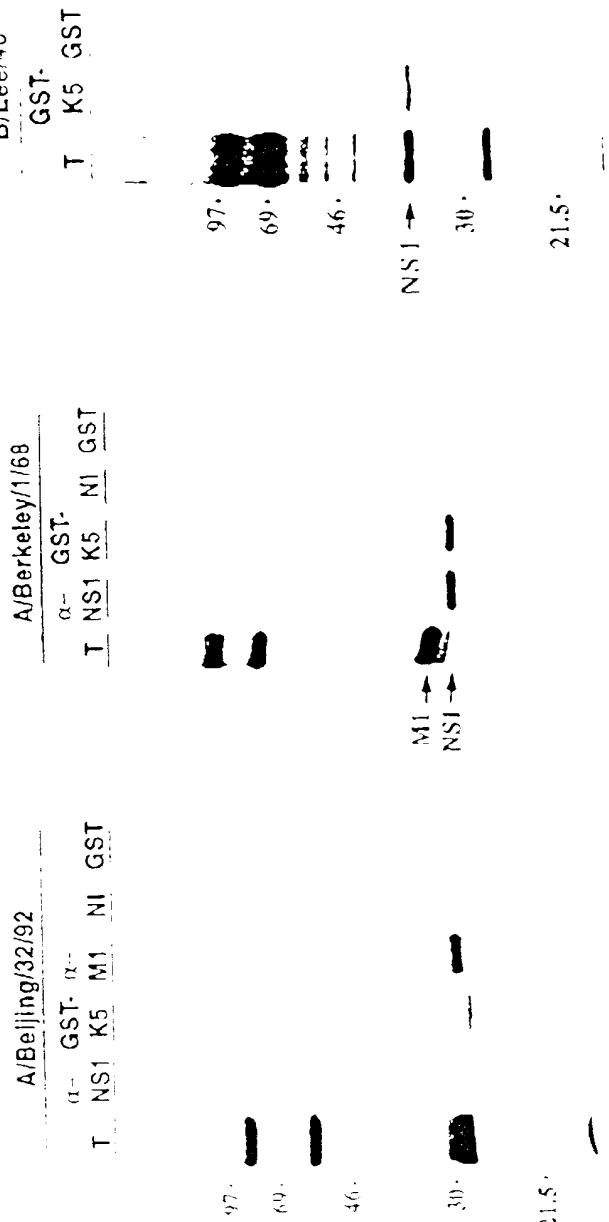


FIG. 15B